

Neville Chemical Co
31217

84-05

1
2
3
4
5
6
7
8 UNITED STATES
9 ENVIRONMENTAL PROTECTION AGENCY
10 REGION 9

11 In the Matter of)
12 NEVILLE CHEMICAL COMPANY,) ORDER
13 Respondent.) Docket No. 84-05
14 PROCEEDING UNDER SECTION 3013)
15 OF THE RESOURCE CONSERVATION)
AND RECOVERY ACT, AS AMENDED)
(42 USC §6934))

16 JURISDICTION

17 The following Order is issued on this date to Neville
18 Chemical Company (Respondent), pursuant to the authority
19 vested in the Administrator of the United States Environmental
20 Protection Agency (EPA) by §3013 of the Resource Conservation
21 and Recovery Act, as amended, (RCRA), 42 USC §6934, and
22 redelegated to the Director, Toxics and Waste Management
23 Division, EPA, Region 9.

24 FINDINGS OF FACTS

25 FACILITY AREA

26 1. Respondent owns and operates a facility located at 12800
27 East Imperial Highway, Santa Fe Springs, California (the
28 "facility").

- 1 2. The facility is engaged in, among other things, the
2 production of chlorinated paraffins. Respondent uses
3 dichlorobenzene (DCB) as a cleaning solvent in its
4 production process.
- 5 3. Dichlorobenzenes (including ortho-, para-, meta-, and
6 mixed DCB) are hazardous wastes as defined in §1004(5)
7 of RCRA, 42 USC §6903(5). The term DCB, as used in
8 this Order, means one or a combination of the following
9 compounds:
10 1,2 dichlorobenzene (a.k.a. ortho-), 1,3 dichlorobenzene
11 (a.k.a. meta-), and 1,4 dichlorobenzene (a.k.a. para-).
- 12 4. On August 15, 1980, Respondent notified EPA, pursuant to
13 §3010 of RCRA, 42 USC §6930, that it generates hazardous
14 wastes at the facility, including halogenated spent solvents
15 and corrosives. DCB is listed, at 40 CFR §261.31, as a
16 hazardous waste constituent of spent halogenated solvents.
- 17 5. Respondent produces chlorinated paraffins at the facility
18 by charging paraffin into a reactor, injecting chlorine at
19 a controlled rate, and chlorinating the product according
20 to customer specifications. The raw materials used to
21 produce chlorinated paraffins include liquid chlorine,
22 paraffin, carbon tetrachloride, and other minor materials.
23 Chlorinated paraffins are used in traffic paints, rubber
24 belts, and lubricating oils.
- 25 6. In one type of reaction used to produce chlorinated
26 paraffins at the facility, wax is diluted with carbon
27 tetrachloride, and chlorinated up to 70% at approximately
28 70°C (158°F). The solution is then stripped by heat and

1 placed under a vacuum to remove the carbon tetrachloride.

2 DCB is used in the production process as a cleaning solvent
3 to strip the residues in the 70% chlorinated paraffin
4 process line. Spent DCB is collected in a storage tank to
5 be reclaimed by distillation at a later date.

6 7. Distillation of DCB at the facility involves the following
7 process:

- 8 1. Add caustic soda (pH=14) to still;
- 9 2. Transfer DCB to still;
- 10 3. Heat DCB to 120°C/248°F;
- 11 4. Inject low pressure steam (around 100°C/212°F);
- 12 5. Steam-strip DCB (DCB and water are condensed out); and
- 13 6. Transfer to clean DCB storage tank.

14 Still-bottom residues and condensate are then transferred
15 into 55 gallon drums for off-site disposal. Reclaimed DCB
16 is reused on-site.

17 8. On August 5, 1983, EPA Region 9 conducted an inspection of
18 the facility under the authorities of the Resource Conserva-
19 tion and Recovery Act (RCRA), 42 USC 6901 et seq., and the
20 Toxic Substances Control Act (TSCA), 15 USC 2601 et seq.
21 The inspection established the possibility that dioxins,
22 furans and/or related compounds were being produced as
23 contaminants of DCB in the facility's DCB distillation
24 process. The specific contaminants of concern to EPA were
25 tetrachlorodibenzodioxin (TCDD) and tetrachlorodibenzofuran
26 (TCDF). During the inspection, the EPA inspector observed
27 spilled still-bottom residues on the ground in the vicinity
28 of the facility's stills.

9. On November 2, 1983, EPA representatives collected samples
of on-site and perimeter soil, uncontained distillation

residue, and drummed still bottom waste at the facility to determine whether dioxins, furans and/or related compounds were being created and released to the environment as a result of the distillation of DCB. The primary compounds detected on-site in soil and spilled residue samples are shown below.

(All units in parts per million (ppm), except for TCDF data.)

<u>Sample Description</u>	<u>Still Residue</u>	<u>On-Site Perimeter Soil</u>	<u>On-site Soil</u>
Sample Number	Y-2858	Y-2857	Y-2856
TCDF	39 ppb	25 ppb	13 ppb
2,4,6-trichlorophenol	100 K*	100 K	-
1,2,4-trichlorobenzene	100 K	100 K	14
Hexachlorobenzene	100 K	100 K	1
1,2-dichlorobenzene	1100	100 K	22
1,3-dichlorobenzene	690	100 K	42
1,4-dichlorobenzene	250	-	10 K

*The use of K indicated that a compound was present in the sample at a value less than the detection limit preceding K.

Other compounds detected in the soil and spilled residue samples included various chlorinated benzenes and phenols.

10. Dioxins and furans can be created from the pyrolysis of chlorinated benzenes. Reactions between chlorophenols and chlorobenzenes may also lead to furan formation.

11. TCDF may be formed under conditions similar to those used by Respondent at the facility. The analytical data summarized in paragraph 9 above confirms that chlorophenols,

1 chlorobenzenes and TCDF is present in the facility's DCB
2 still residue.

3 12. EPA has expressed its concern with the substantial risk
4 to human health and the environment posed by dioxins and
5 furans.

6 The tetra-, penta-, and hexachlorodibenzodioxins and
7 -dibenzofurans (CDDs and CDFs) are of particular concern
8 based upon known or expected toxicity. (48 FR 14514,
9 April 4, 1983.)

10 13. Human exposure to DCB is reported to cause hemolytic anemia
11 and liver necrosis, and 1,4 DCB has been found in human
12 adipose tissue. In addition, DCB is toxic to nonhuman
13 mammals, birds, and aquatic organisms. DCB is metabolized
14 by mammals, including humans, to various dichlorophenols,
15 some of which are as toxic as DCB.

16 14. On March 12, 1984, Mark Bradford, an employee of EPA's
17 contractor Ecology and Environment, Inc., contacted John
18 Ferguson, the plant manager, to gain access to the facility.
19 Mr. Bradford advised Mr. Ferguson that he was requesting
20 access to the facility pursuant to EPA statutory authority
21 and that the purpose of his visit was to clarify and update
22 a plot plan of the facility provided by Respondent during
23 a previous site visit. An updated plot plan would
24 facilitate preparation by EPA of a sampling plan to fully
25 characterize site contamination. Mr. Ferguson refused
26 site access to Mr. Bradford. Mr. Ferguson also refused to
27 advise Mr. Bradford of facility changes since preparation
28 of the original plot plan.

1 15. On March 12, 1984, after being refused access to the
2 facility, Mr. Bradford advised Steve Simanonck, an employee
3 of EPA Region 9, of Respondent's refusal to allow site
4 access or provide the necessary information to update the
5 plot plan.

6 Mr. Simanonok contacted Respondent's headquarters office
7 located in Pittsburgh, Pennsylvania and spoke with Tom
8 McKnight, corporate counsel. After much discussion,
9 Mr. McKnight agreed to allow Mr. Bradford to inspect the
10 facility the following day (March 13, 1984) for the purpose
11 of updating and clarifying the plot plan. Mr. McKnight
12 advised Mr. Simanonok that Mr. Bradford would be given
13 access to the facility on the following morning.

14 16. On March 13, 1984, being advised by EPA that the Respondent
15 had agreed to allow access, Mr. Bradford contacted
16 Mr. Ferguson to arrange a site visit that same day. Despite
17 prior assurances to Mr. Simanonok, Respondent again refused
18 access to Mr. Bradford.

19 17. On March 13, 1984, the California Department of Health
20 Services (DOHS) and the Los Angeles County Department
21 of Health Services (LA DOHS) inspected the facility and
22 surrounding area. Based upon this inspection, DOHS and LA
23 DOHS jointly issued a Notice of Violation to Respondent on
24 March 13, 1984. The Notice of Violation directed Respondent
25 to initiate the following remedial actions:

- 26 1) Discontinue any further unlawful discharges of
27 hazardous waste forthwith.
28 ---

- 2) Remove and legally dispose of all hazardous waste accumulated along the west side of the facility adjoining the railroad tracks.
- 3) Provide adequate controls to prevent runoff and emissions of contaminated materials from the subject facility.
- 4) Institute air monitoring to determine the presence and concentration of toxic emissions from the subject facility. This shall include a monitoring station at the adjacent residential area west of the plant.
- 5) Surface soil sampling in adjoining areas shall be undertaken to determine the extent to which hazardous materials have migrated from the subject facility. Soil sampling shall be conducted in the presence of a representative of this office and the analytical results submitted to this Department by March 22, 1984.
- 6) Submit a comprehensive site characterization and cleanup plan to this office by March 22, 1984.

OFF-SITE AREA

18. Respondent also owns a triangular-shaped parcel located adjacent to and south of the facility ("off-site area").
19. EPA has received information indicating that the Respondent has disposed of hazardous wastes at the off-site area. (The off-site area may also be known as the "Kalico dump".) Information pertaining to Respondent's disposal activity at the off-site area includes:
 - a. On or about June 11 1970, Robert Hartley, an employee of the Los Angeles Department of County Engineer, inspected the facility and observed discharges from the facility to the off-site area. The discharges included ferric chloride leaking from air pollution equipment and liquid waste from the facility's cooling tower (laboratory analysis of this waste showed a pH of 2.2 and numerous inorganic constituents). The County Engineer also

1 observed chlorinated paraffin spilled on the adjoining
2 railroad right-of-way.

3 b. On or about March 17, 1980, Mr. L. R. Bitner, plant
4 manager of the facility, completed an Industrial Waste
5 Survey that was filed with the Abandoned Site Project
6 of the California Department of Health Services.
7 Mr. Bitner reported that prior operations at the
8 facility included disposal of waste chlorinated hydro-
9 carbon that was discharged or dumped onto plant property.

10 20. The hazardous wastes and contaminants described in para-
11 graphs 9 and 19 above are being treated and disposed of at
12 the facility in such manner that they are being released
13 and discharged from the facility onto the soil and thus
14 may be carried off-site via airborne releases and/or
15 surface runoff.

16 DETERMINATION

17 On the basis of the information recited above and all
18 other information available, EPA has determined that hazardous
19 wastes are being stored, treated or disposed of at the facility
20 and are present at the facility.

21 EPA has further determined that hazardous wastes have been
22 released from the facility and may present a substantial hazard
23 to human health or the environment.

24 EPA has further determined that Respondent is a current
25 owner/operator responsible for conducting the actions ordered
26 herein, which are necessary to protect human health and the
27 environment.

28 ---

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20
- 21
- 22
- 23
- 24
- 25
- 26
- 27
- 28

1. FACILITY AREA SOIL SAMPLING

2. DUST SAMPLING

-9-

- b) The area between the Imperial Highway entrance and the processing area of the facility.
- c) The area immediately south of the facility's DCB stills.
- d) The length of the western boundary of the facility.

At each of the above sampling locations, sufficient sample volume shall be obtained to provide capability for laboratory analysis employing a detection of 1 part per billion (8-ounce volume). In addition sufficient volume must be obtained to provide EPA with duplicate samples (16 ounces total). In order to prevent cross-contamination, the HEPA sample hose and inner bag must be replaced between each sample location.

3. OFF-SITE AREA

A plan to determine the lateral and vertical distribution of hazardous wastes disposed at this location. Since exact disposal locations are unknown, the off-site sampling plan should be based upon a preliminary assessment of past disposal activities. The preliminary assessment which shall include, at a minimum:

- a. A review of state and local agency files;
- b. A review of historical aerial photographs;
- c. Interviews with current and former plant employees;
- d. Identification of former owners and operators;
- e. Identification of industrial activities, chemical processes, production volumes, and anticipated waste streams from current and former owners and operators at the facility; and

1 f. Identification of former industrial and or chemical
2 process areas, including probable locations of waste
3 pits, ponds, lagoons, trenches, seepage and/or septic
4 systems, buried drums, and conveyance structures from
5 the facility and/or other adjacent facilities.

6 The preliminary assessment shall include a comprehensive
7 evaluation of all items contained in items (a) through (f)
8 above. Respondent shall retain records of each specific
9 reference obtained, and shall make these records available
10 to EPA for inspection or submittal to EPA upon request.

11 4. SAMPLING QUALITY CONTROL

12 Quality control protocols for the sampling program
13 including:

- 14 a) Equipment
- 15 b) Decontamination of sampling equipment
- 16 c) Sample handling and decontamination
- 17 d) Procedure for packing hazardous waste samples
- 18 e) Personnel and site safety procedures
- 19 f) Sample identification
- 20 g) Chain-of-custody
- 21 h) Identification of persons conducting the sampling

22 5. DUPLICATE SAMPLES

23 A plan for retaining, identifying, maintaining and
24 submitting to EPA, upon request, duplicates of all samples
25 taken pursuant to this Order. These duplicate samples
26 shall be collected and identified in the identical manner
27 as those collected by the Respondent.

28 ---

1 6. ANALYTICAL AND QUALITY CONTROL PROTOCOLS

2 Respondent may elect to perform soil sample analysis in
3 phases. For example, Respondent may initially analyze the
4 discrete surface soils and the composite subsurface soils
5 obtained at depths of 6" to 12". If Respondent elects
6 phased analysis, Respondent shall submit the initial
7 analytical results to EPA immediately upon Respondent's
8 receipt of such results, and obtain EPA direction whether
9 analy is of subsurface composite samples at depths of 12"
10 to 24" and 24" to 36" require analysis.

11 Respondent's proposal shall state whether phased analysis,
12 as discussed above, will be utilized.

13 In preparing the plan specified in paragraphs 1 through
14 6 of this Order, the facility shall refer to the attached
15 document "Determination of 2,3,7,8- TCDD in Soil and Sedi-
16 ment", May, 1983 (Attachment A). Respondent shall employ
17 equivalent techniques and procedures in accomplishing the
18 tasks required under this Order. Respondent shall modify,
19 after consultation with the laboratory, these analytical
20 procedures to include analysis for the following compounds:

- 21 - Total Tetrachlorodibenzofuran (TCDF)
- 22 - 2,3,7,8- TCDF
- 23 - Total Pentachlorodibenzofuran (PCDF)
- 24 - Total Hexachlorodibenzofuran (HCDF)
- 25 - Total Tetrachlorodibenzodioxin (TCDD)
- 26 - 2,3,7,8- TCDD
- 27 - Total Pentachlorodibenzodioxin (PCDD)
- 28 - Total Hexachlorodibenzodioxin (HCDD)

26 In addition, Respondent shall perform the initial analyses
27 for all organic and inorganic constituents on the Hazardous
28 Substance List (Attachment B).

1 COMPLIANCE SCHEDULE

2 1. Facility Area Soil and Dust Sampling (Items 1, 2, 4, 5 & 6
3 of this Order)

4 a. The facility and dust sampling proposal must be
5 submitted by Respondent to Betsy Curnow, Environmental
6 Protection Agency, at the address listed below, within
7 30 days of the effective date of this Order. The
8 proposed plan shall be subject to review, modification
9 and approval by EPA.

10 b. Respondent shall complete all work, including sample
11 analyses, as set forth in the approved plan within
12 45 days after receipt of EPA approval of the proposal.

13 c. Respondent shall submit a written report to EPA
14 describing the data collected and findings made within
15 60 days after receipt of EPA approval of the proposal.

16 2. Off-Site Area (Items 3,4,5 & 6)

17 a. Respondent shall submit to EPA its preliminary
18 assessment of the designated off-site area within
19 45 days of the effective date of this Order.

20 b. Respondent shall submit a sampling and analysis plan
21 based upon the preliminary assessment of the designated
22 off-site area within 60 days of the effective date of
23 this Order. The proposed plan shall be subject to
24 review, modification and approval of EPA.

25 c. Respondent shall complete all work, including sample
26 analyses, as set forth in the approved plan within
27 45 days after receipt of EPA approval of the proposal.

28 ---

1 d. Respondent shall submit to EPA a written report
2 describing the data collected and findings made within
3 60 days after receipt of EPA approval of the proposal.

4 Based upon the data generated by the sampling and analysis
5 program, EPA may order additional sampling, analysis, reporting
6 and monitoring to fully ascertain the nature and extent of the
7 hazard.

8 Employees and authorized representatives of EPA and the
9 State of California shall be granted access to Respondent's
10 facility for the purpose of verifying compliance with the
11 provisions of this Order.

12 EFFECTIVE DATE - OPPORTUNITY TO CONFER

13 This Order is effective immediately upon receipt by
14 Respondent, and all times for performance of response activities
15 shall be calculated from that date.

16 Under the provisions of RCRA, Respondent is entitled to
17 request a conference with EPA. At any conference held pursuant
18 to Respondent's request, Respondent may appear in person and by
19 attorney or other representatives for the purpose of presenting
20 any objections, defenses or contentions which Respondent may
21 have regarding this Order. Any objection, defense or contention
22 which Respondent may make should be in writing, signed and
23 forwarded to the contact person named below on or before the
24 date on which you are required to submit the proposal. The
25 opportunity to confer does not alter the requirement for
26 submittal of the plan within thirty days of the effective date
27 of this Order.

28 ---

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20
- 21
- 22
- 23
- 24
- 25
- 26
- 27
- 28

2
3
4
5
6
7
8
9
10
11
12

13
14

16

18
19

211

22
23
24